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# United States Patent [19]

# Slettnes

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[54]	METHOD AND SYSTEM FOR
	VELOCITY-NORMALIZED POSITION-
	BASED SCANNING

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[51] Int. Cl.<sup>7</sup> ...... G01N 15/06

[58] Field of Search ...... 204/612; 250/573,

250/576, 461.2

# [56] References Cited

#### U.S. PATENT DOCUMENTS

5,192,412 3/1993 Kambara et al. ...... 204/612

#### OTHER PUBLICATIONS

Westetal.,377XESoftwarePackageOverview, website—http://serac.mbt.washington.edu/Software/377XE/STC\_Soft-

ware\_377XE\_Index.html, pp. 1-7 (Last Edited on Jul. 29, 1997).

Tibbetts, Clark, "Raw Data File Formats, and the Digital and Analog Raw Data Streams of the ABI Prism 377 DNA Sequencer," website —tibbetts@ctrvax.vanderbilt.edu, pp. 1–35 (Aug. 1995).

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## [57] ABSTRACT

A data collection method for scanning a scan window comprising one or more channels is described. In the method of the invention an integrated signal (S) is measured across a scan window including one or more channels using an integrating detector. Next, a velocity-normalized integrated signal (Sn) is determined based on the integrated signal (S) and a scan velocity.

## 25 Claims, 8 Drawing Sheets

Define channel width (w) in terms of a start point and end point
1
Locate integrating detector at start point of channel
<b>↓</b>
Clear integrating detector
Ţ
Record start time, ts
Ţ
Scan the integrating detector across the channel from the start point to the end point
1
Record an end time, to
1
Compute an integration time, ti = tc - ts
1
Record an integrated signal
Į
Compute a velocity-normalized integrated signal
1
Repeat for each channel in a scan window